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(54) Title: LABELLED END USER CONTAINERS FOR ORALLY ADMINISTERED SUBSTANCES

(57) Abstract: The labelled container (10) of the invention includes a container having a bottom portion (16) and a sidewall (18) extending therefrom to an opening (20) at a end opposite the bottom portion (16). The opening (20) is adapted for receiving a removable cover (22) (or cap). The sidewall (18), or at least a portion thereof, is transparent. A label (30) bearing indicia representative of the contents of the container is disposed on the outer surface of the sidewall (18). The label has a substantially transparent region (32) surrounded by a substantially non-transparent region (34). When the label (30) is disposed on the sidewall (18), the transparent region (32) is positioned to overlap at least part of the transparent portion of the container (10). The transparent region (32) of the label may be a hole pressing through the label or a sheet or film which is a sheet contiguous with the non-transparent region (34) of the label (30). Preferably, the non-transparent region (34) of the label (30) includes a border extending from the transparent region of the label. The border has an optical reflectivity characterized by a first spectral range. A portion of the non-transparent region (34) of the label (30) extending from points adjacent to the border has an optical reflectivity characterized by a second spectral range, where the first spectral range is different than the second spectral range.

LABELLED END USER CONTAINERS FOR ORALLY ADMINISTERED SUBSTANCES

FIELD OF THE INVENTION

This invention is in the field of packaging for orally administered medicants, food supplements, nutritional supplements and the like, and particularly relates to consumer packaging for such substances.

BACKGROUND OF THE DISCLOSURE

It is important that a consumer, or end user, be able to readily, and reliably, identify various substances that he/she must take at various times over a period. Such substances may be in capsule, tablet, particulate, powder, or liquid form, and may include for example, prescription medicants or drugs, non-prescription/over-the-counter medicants (such as aspirin, Echinacea and St. Johns Wort), vitamins, minerals, anti-oxidants, joint enhancing substances (such as glucosamine and chondroitin sulfate), memory enhancing substances, and others. It is important in many cases that the consumer also be able to easily, and reliably, determine the prescribed dosages and times for administration of such substances.

These important considerations are conventionally addressed in the marketplace by providing such substances to the consumer, in labelled packages where the labels include indicia representative of the identity and prescribed (or recommended) dosage and optionally times of administration. Typically, the substances are provided in cylindrical, covered (or capped, preferably with a child-safe removable cover) containers having transparent sidewalls.

For such containers, the label is an opaque sheet which is adhesively fixed to the sidewalls, often covering substantially all of the sidewalls. The sidewall-covering aspect is often utilized to prevent ambient light from entering the container during storage (since such ambient light in some cases may negatively affect the stability of the contained substance over time. Such conventional labelled containers are effective in providing safe storage of such substances for a consumer, providing adequate information on the identity of the contents and the prescribed or recommended dosages and administration

times. However, it is difficult for a consumer to confirm the identity of the contained substance, such as from the appearance of the contained substance, e.g., capsule, color and the like. It is difficult to determine the amount of the substance remaining in the container. To confirm the identity of the contained substance in conventional labelled containers, the consumer can remove the cover and observe the contents by looking into the container from the top, and draw a conclusion as to the identity of the substance. This requires a specific action by the consumer (i.e., removing the cover from the container), which is sometimes difficult (for example, for persons with limited dexterity, and/or visual acuity) and tedious (where the contents of multiple containers are to be observed). Such action also invites contamination of the contents, and inadvertent spilling and mixing of substances from multiple containers, particularly by consumers with limited dexterity and visual activity. The prior art containers suffer from such difficulties, often posing severe and even life-threatening consequences.

It is often very important that a consumer maintain a prescribed dosage at particular points in time, where deviations may have important adverse consequences. In such cases, a consumer must be aware of the remaining amount of a substance in a container so that when the remaining amount reached a certain level, that consumer can replenish the substance before exhausting the then-present amount. In the prior art, this could only be accomplished by removing the cover for the container and observing the amount remaining. Again, such procedure introduces the above mentioned problems, that is, danger of contamination and spillage and/or mixing of substances from multiple containers and others.

Accordingly, it is an object of the invention to provide an improved end-user container for medicants, food supplements, nutritional supplements and the like.

Another object is to provide an improved end-user container for medicants, food supplements, nutritional supplements and the like, which permits easy and reliable determination of the contents and remaining amount of a contained substance.

Yet another object is to provide an improved end-user container for medicants, food supplements, nutritional supplements and the like, which permits easy and reliable determination of the contents and remaining amount of a contained substance, without requiring opening of the container.

SUMMARY OF THE INVENTION

The invention is a labelled container for medicants (prescription and non-prescription), food supplements (including vitamins, minerals, anti-oxidants and others), nutritional supplements, joint enhancing substances, memory enhancing substances and others. The contained substances may be in capsule, tablet, particulate powder, liquid or other form. The labelled containers of the invention permit an end-user, or consumer, to visually determine the amount remaining (or at least that the amount remaining is above a threshold below which it is desired to replenish the supply.

The labelled container of the invention includes a container having a bottom portion and a sidewall extending therefrom to an opening at a end opposite the bottom portion. The opening is adapted for receiving a removable cover (or cap). The sidewall or at least a portion thereof is transparent. A label bearing indicia representative of the contents of the container is disposed on the outer surface of the sidewall. The label has a substantially transparent region surrounded by a substantially non-transparent region. When the label is disposed on the sidewall, the transparent region is positioned to overlap at least part of the transparent portion of the container. The transparent region of the label may be a hole pressing through the label or a sheet or film which is contiguous with the non-transparent region of the label. Preferably, the non-transparent region of the label includes a surrounding border extending from or near the periphery of the transparent region of the label.

The border may fully surround the transparent region of the label, or may just extend along a portion of that non-transparent region. The border has an optical reflectivity characterized by a first spectral range. A portion of the non-transparent region of the label extending from points adjacent to the border has an optical reflectivity characterized by a second spectral range, where the first spectral range is different than the second spectral range.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects of this invention, the various features thereof, as well as the invention itself, may be more fully understood from the following description, when read together with the accompanying drawings in which:

FIG. 1 shows a labelled container in accordance with the invention;

FIG. 2 shows an exemplary label for use with the container of FIG. 1; and

FIG. 3 shows an alternative exemplary label for use with the container of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 shows a labelled container 10 according to the invention. The container 10 is illustrated in an assembly 12 including container 10 and a screw-on cap (or cover) 14. In the illustrated embodiment, the container 10 includes a circular disk-shaped bottom portion 16 with a cylindrical sidewall 18 extending from the perimeter of the bottom portion to a circular opening 20 at an end opposite the bottom portion 16.

As illustrated, the sidewall 18 is in the form of a cylindrical shell extending along an axis A which is perpendicular to the nominal plane of the disk-shaped bottom portion 16. Thus, the sidewall 18 has a circular cross-section. In other forms of the invention, the sidewall 18 may have a cross-section which is other than circular, for example, rectangular. In the preferred form, the sidewall 18 is transparent in its entirety. In alternate forms, only a portion or sub-region of the sidewall 18 is transparent. A cap (or cover) 22 is adapted to screw on to a threaded region 24 which extends from the opening 20.

In the illustrated embodiment, a rectangular label 30 made of a sheet material, is adhesively affixed to the exterior of sidewall 18. Preferably, the label covers most or all of the sidewall 18, and most of the label is opaque, so as to substantially prevent passage of ambient light through the sidewall 18 to the interior of container 10. Other methods may be used to affix the label 30 to the sidewall 18. For example, the label might be a cylindrical shell, formed of a heat-shrinkable sheet material, which is positioned over the sidewall and then heat-shrunk to secure it to the sidewall 18.

The mostly opaque label 30 includes a transparent region 32 circumscribed by the opaque portion of label 10. Where the sidewall is transparent in its entirety, the transparent region 32 may be positioned anywhere within the outer boundaries of the label. Where only a portion of the sidewall 18 is transparent, the transparent region 32 of label 30 is positioned on that label so that when the label is affixed to the sidewall 18, the transparent region 32 is at least partially (and preferably entirely) in registration with the transparent region of the sidewall 18.

The transparent portion 32 of label 30 is positioned on the label so that when the label is affixed to sidewall 18, an optical path extends through the region 32 and the transparent (portion of) sidewall 18 at a position to permit visual determination of when the amount of substance within the container is below a predetermined threshold, indicating that replenishment is in order. In various forms of the invention, the periphery of region 32 may have any shape, such as circular (as illustrated in FIGS. 1-3), rectangular, oval, star-shaped, polygonal-shaped, or other shape. FIGS. 2 and 3 show alternate forms of label 30. In FIG. 2, region 32 is in the form of a void region, or hole. In FIG. 3, region 32 is in the form of a light transmissive film.

As noted above, the principal portion of the label (that is the portion dispersed about transparent region 32) is opaque, or substantially opaque, and is referred to below as a "non-transparent" region of label 30. In keeping with the invention, a subregion 34 of that non-transparent region extending from the periphery of transparent region 32, is characterized by an optical reflectivity in a first spectral range, while at least a portion of the remainder of the non-transparent region extending from the outer boundary of region 34, is characterized by a optical reflectivity in a second spectral range, where the first and

second spectral ranges are different. By way of example, region 34 may be white, while at least the immediately surrounding portion of label 10 is a dark color. With this configuration, the consumers' eyes are readily drawn to the region 32, so that an assessment of the level of the contents, and the contents themselves may be easily and reliably determined.

In use, the contents of the container 10 may be a substance in capsule, tablet, particulate, powder, or liquid form. The substances may include medicants or drugs (prescription or non-prescription), vitamins, minerals, antioxidents, joint enhancement substances, memory enhancement substances, or other.

With the container of the invention, a consumer may easily and reliably determine when the amount of contained substance falls below a predetermined level (established by the position of the transparent region of the label, relative to the bottom portion of the container). This determination can be made by viewing the contents through the in-registration transparent regions of the label and the sidewall. This determination can be made without requiring a high degree of manual dexterity or visual acuity, and without danger of spillage or mixing with substances from other sources, and without risk of contamination from ambient substances (e.g., dust).

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of the equivalency of the claims are therefore intended to be embraced therein.

CLAIMS

What is claimed is:

1. A labelled container comprising:

(a) a container having a bottom portion and sidewall extending therefrom, said sidewall having a transparent region,

(b) a sheet bearing indicia representative of the contents of said container, said sheet having a substantially transparent region surrounded by a non-transparent region, said transparent region being positioned in said sheet to overlap at least part of said transparent region of said container when said label is affixed to said container.

2. A labelled container according to Claim 1 wherein said transparent region is a hole pressing through said sheet.

3. A labelled container according to Claim 1 wherein said transparent region is a sheet contiguous with said non-transparent region.

4. A labelled container according to Claim 1 wherein said non-transparent region includes a border extending from said transparent region having an optical reflectivity characterized by a first spectral range, and wherein the region of said non-transparent region adjacent to said border has an optical reflectivity characterized by a second spectral range, said first spectral range being different than said second spectral range.

5. A labelled container according to Claim 2 wherein said non-transparent region includes a border extending from said transparent region having an optical reflectivity characterized by a first spectral range, and wherein the region of said non-transparent region adjacent to said border has an optical reflectivity characterized by a second spectral range, said first spectral range being different than said second spectral range.

6. A labelled container according to Claim 3 wherein said non-transparent region includes a border extending from said transparent region having an optical reflectivity characterized by a first spectral range, and wherein the region of said non-transparent region adjacent to said border has an optical reflectivity characterized by a second spectral range, said first spectral range being different than said second spectral range.

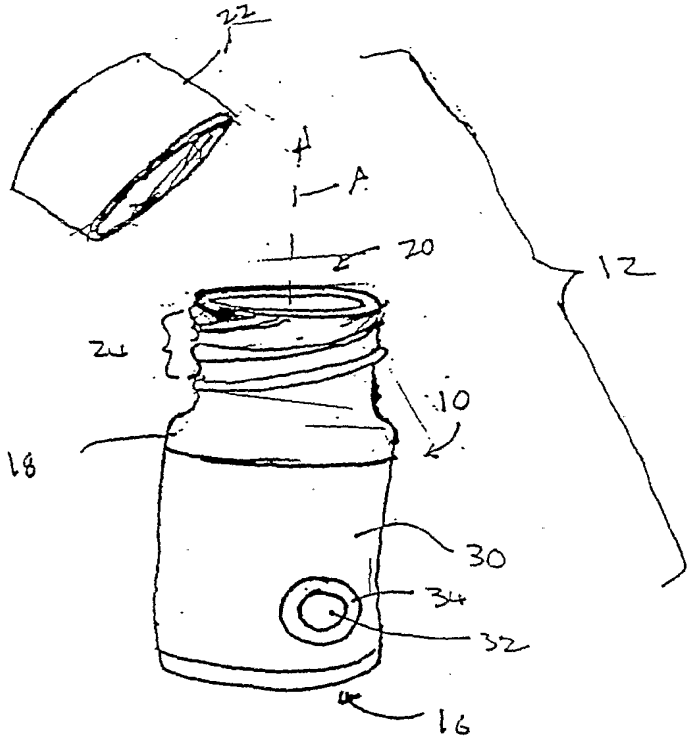

FIG 1

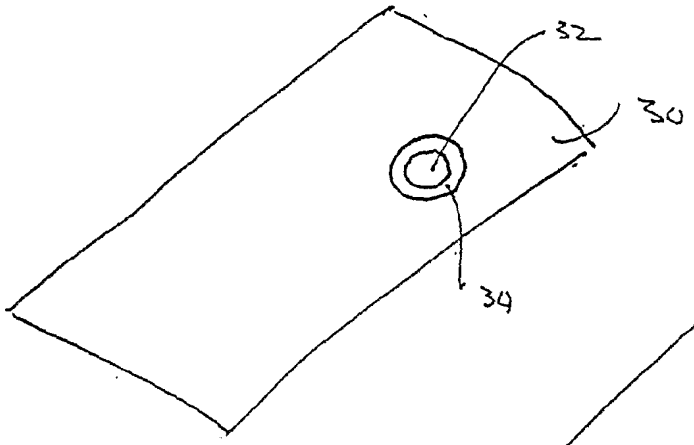

FIG 2

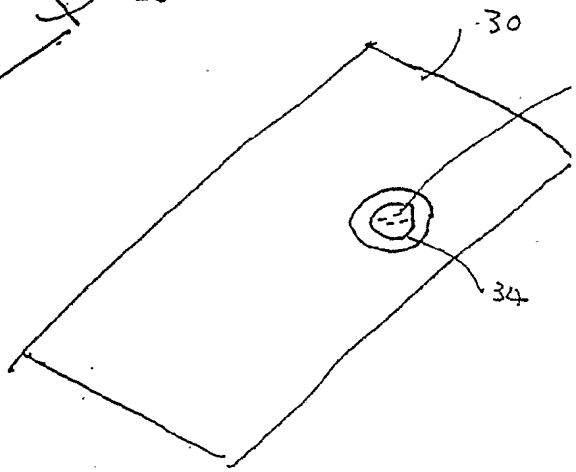

FIG 3